



# TRANSBOUNDARY THREATS TO PRODUCTION, HEALTH AND ENVIRONMENT – PREVENTION IS KEY

## FAO FOCUS AREA

Sick animals do not show their visas at national borders, nor do plant pests or food-borne pathogens. When it comes to dealing with these transboundary threats to agricultural production, to health or to the environment, no country can stand alone. Prevention and control of these pests and diseases requires neighbouring countries and regions to work together – to undertake joint activities and establish complementary policies. Prevention has proven to be more cost effective and, above all, it protects livelihoods.

Throughout its history, FAO has taken advantage of its broad reach to connect governments, researchers and international institutions involved in preventing, detecting and, when necessary, containing transboundary diseases. FAO provides guidance needed to build infrastructure that enables collaboration in gathering and sharing information and establishing cost-effective surveillance and control activities. Investment in prevention and control is a fraction of the cost of responding to a fully developed crisis.

### **An international organization to tackle transboundary problems**

The FAO Emergency Prevention System (EMPRES) – for Animal Health, Plant Protection and Food Safety – is the leading international programme on technical issues related to prevention, preparedness and timely reaction. Through EMPRES, FAO calls upon its presence in more than 190 countries and its in-house expertise to bring transboundary issues to the people who need to make decisions. It works at government level to support policy development and establish cross-border cooperation while also raising the capacity of farmers all along the food chain. EMPRES serves as a front line of defense in terms of prevention and on-the-ground surveillance.

### **FAO BRINGS FOOD SECURITY DIMENSION TO ONE HEALTH APPROACH**

A deadly 2011 outbreak of *E. coli* in Germany set off a food safety scare and economic spiral that affected consumers and farmers across Europe and Central Asia, while researchers sought the source of the outbreak. By the time bean sprouts from a small farm in northern Germany were identified as the likely source, 49 people had died, almost 4000 were sickened, and the outbreak had cost USD 2.8 billion in losses and unsold vegetables across Europe. This was a flag-raising reminder that in today's interconnected world, population growth, modern transportation and increased global trade in animals and animal products have vastly accelerated the spread of zoonoses – diseases shared between animals and humans that are capable of wreaking major havoc on farmers' livelihoods and human health alike. FAO, in partnership with the World Organisation for Animal Health and the World Health Organization, has adopted a One Health strategy with a multidisciplinary and holistic approach to disease prevention across the food chain that also integrates drivers such as trade and climate change into the mix – linking disease prevention to food security.



# EXAMPLES OF IMPACT

## EMPRES PLANT PROTECTION: LOCUST CONTROL

In 2003, a locust outbreak escalated from 50 000 infested hectares to a 13 million hectare plague, costing billions to control and causing untold human tragedy for the communities in its path. The money spent to stop that plague would have paid for 170 years of prevention.

**PROCESS:** EMPRES introduced a multi-partner preventive control programme in ten West and Northwest African countries to strengthen surveillance, control and environmental monitoring capacities. EMPRES also introduced bio-pesticides, lessening threats posed by chemicals throughout the control process, from storage to spraying.



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**IMPACT:** Between 2006 and 2011, Mauritania and Niger successfully controlled four desert locust outbreaks. The programme, which was originally 80 percent resource partner funded and 20 percent country funded, is now 80 percent country funded, with countries implementing activities and FAO in a facilitator role. The countries also became resource partners themselves, when they delivered pesticides from their stockpiles to other countries in need, such as Mauritania to Yemen, and Mali and Morocco to Georgia.

## EMPRES ANIMAL HEALTH: DISEASE SURVEILLANCE

Lack of dependable lines of communication from the field means critical loss of time in preventing the spread of animal disease outbreaks.



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**PROCESS:** EMPRES initiated use of SMS and digital pen technologies for reporting avian flu outbreaks and now is making them available for multiple disease surveillance. Countries where they have been piloted have readily moved to adopt the new techniques.

**IMPACT:** Bangladesh piloted the SMS reporting technology, and Malawi, Namibia and Zambia piloted a project using a digital pen that contains a built-in camera and Bluetooth connections. In both cases, the time required to collect and transfer information from the field was reduced from days to a matter of minutes. A new phone application has been developed to pinpoint outbreaks with GPS, and report directly to governments so there is no fear that unfounded rumours become public knowledge with the potential to have negative impact on trade.